## **DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-003680 Address: 333 Burma Road **Date Inspected:** 19-Aug-2008

City: Oakland, CA 94607

**OSM Arrival Time:** 1430 **Project Name:** SAS Superstructure **OSM Departure Time:** 2230 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** See below **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS: Delayed / Cancelled:** Yes No N/A

**Bridge No:** 34-0006 **Component: OBG** Fabrication

### **Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

CWI Inspectors: Mr. Chen Xi and Mr. Sun Wi

Orthotropic Box Girder (OBG):

Heavy Tower Shop #3:

Around 1500 hours ZPMC QC representative Mr. Fu Yuhong informed the QA Inspector that ZPMC QC and ABF QA Inspection personnel will be conducting initial visual inspections of deck panels DP063-001, DP586-001, DP606-001 and DP616-001 and the areas of the closed rib welds that need to be repaired have been marked by soapstone. The QA Inspector performed random visual inspections of each of the welds and a few additional areas of weld overlap were identified by the QA Inspector as needing to be repaired. The QA Inspector documented the initial visual inspections on the yellow inspection status tag that is attached to the deck panels.

Deck Repair Area #2 (yard)

The QA Inspector observed ZPMC welder Mr. Wi Han Chang Hou, stencil 59464 is using welding procedure



# WELDING INSPECTION REPORT

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specification WPS-B-T-2221-B-L2C-S to make submerged arc groove weld DP612-001-009. The QA Inspector observed ZPMC CWI Mr. Chen Xi had recorded a welding current of 557 amps, 30.6 volts and a travel speed of 524 mm per minute. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Xu Peipei stencil 050323 had used welding procedure specification WPS-B-T-2231-B-U2-F to make flux cored groove weld between DP602-001 and DP603-001. The QA Inspector observed ZPMC CWI Mr. Chen Xi had recorded a welding current of 316 amps and 30.2 volts. Items observed by the QA Inspector appear to comply with project specifications.

#### Assembly Bay

QA performed ultrasonic inspection of deck panel DP018-002 welds to locate potentially cracked tack weld locations. A total of 91 welds were inspected and five potential crack indications were observed. These areas will be evaluated with the phased array ultrasonic technique at a later time.



#### **Summary of Conversations:**

See above.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer